Amendments to the Specification

Please replace the paragraph beginning at page 7, line 24, with the following rewritten paragraph:

The Fig. 2, illustrates the variant of an electron sterilizer structure with one working electron beam and corresponding one scanning system. Here, the output attachment block 2 consists from only one output devise 9, which is attached to the output of MLIA 1. The output devise 9 has a form of a vacuum window which enables the transfer of the relativistic electron beam 10 from vacuum (which is realized within the accelerating channels MLIA 1) directly into the air atmosphere. The irradiation block 3 has only one irradiation system which has a form of a scanning system 11 of the electron beam 10. The irradiation object 5 is placed ~~uinder~~ under the scanning system 11. The scanning angle of the beam 10 in the system. 11 is such that the irradiation. path 12 covers totally the transverse dimension of the irradiation object 5 (relatively to the direction of the irradiation object 5 on the transport system 4 which is designed by the arrow 13).

Please replace the paragraph beginning at page 9, line 16, with the following rewritten paragraph:

The work of the electron sterilizer depends on the following: In the variant illustrated by fig. 2, when the scanning system 11 is turned off, the electron beam 10 is moving vertically, forming, on the surface of the irradiation object 5 a spot, the form of which coincides with the form of the cross-section of the beam 10. As a rule, the dimensions of this spot are much smaller than the dimensions of the irradiation object 5. Consequently, in such case, only a small surface of the object 5 can be irradiated. When the scanning system 11 is turned on, a periodically alternating in time magnet field is generated in the process of crossing of the electron beam 10. It means that, in the horizontal plane, the alternating in time Lorentz force begins to act on the electric beam 10. Consequently, under the effect of Lorentz force, at each moment of time, the electrons of the beam 10 deviate from the previously ~~strait-line~~ straight line direction of movement for an angle which depends at a given moment on the strength of the magnetic field as well as on the energy of the beam. Since, as it was mentioned before, the magnetic field changes with time, the deviation angle changes by the sign and by magnitude as function of time also. As a consequence, the electron beam 10 deviates systematically (it means scanning) from the vertical (line) in the plane perpendicular to the irradiation–object 5 plane, which is called the scanning plane. A peculiar path, which is called the irradiation path 12, forms on the surface of the irradiated object 5 within time interval which is much larger than

the time of the change of the magnetic field. Since the irradiation objects 5 are shifted on the transport system 4, relatively to the MIA 1, the irradiation path 12 gradually moves along the irradiation object surface, parallel to itself. This assures the sterilization.

Please replace the paragraph beginning at page 12, line 1, with the following rewritten paragraph:

Application of the multi-beam structure versions of MLIA opens a possibility for a more simple solution (than that shown on fig. 3) of increase of sterilizer's productivity. The fig. 4 shows a constructive idea of this solution. As it was mentioned before, the structural difference of this version from the version illustrated on fig. 3 depends on the form of the ~~irradiatio~~ irradiation system block 3. In fig. 4 it has a form of the electron-beam defocusing system 17 (e.g. defocusing magnetic lenses). In the presented structure, the electrons of each electron beam 18 move vertically down between the output from the four-channel MLIA 16 and the defocusing system 17. After the beam 18 passes the defocusing system 17, the trajectories of different electrons deviate from the vertical at different angles. This results in divergence of the initially linear electron beams 18. Consequently, the irradiation spot on the surface of the irradiated object 5 becomes bigger than in a case of not diverging beam irradiation. All of these irradiation spots merge into a continuous irradiation path 19. By a movement of the irradiation object 5 in the transport system 4, a parallel to itself movement of the irradiation path 19 takes place, resulting in a successive irradiation of the total surface of the object 5. At the same current density of electron beam, in this structural version, the irradiation–path width 12 appears much wider than the width of an analogous path in a one-beam system (look fig. 2). Besides this, the principle of the performance of this structure version of the sterilizer does not differ from that of the previous examples.